

**REMARKS**

Claims 13-14 and 19-24 have been canceled. New claim 31 has been added.

Claims 1 and 25 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Applicant has amended claims 1 and 25 to address the issue noted by the Examiner.

Claims 9-12 and 114-24 were rejected under 35 U.S.C. 102(e) as being anticipated by Vaucher. Claims 1-8, 13 and 25-30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vaucher.

Turning first to claims 1 and 25, Applicant submits that the claim language recites three conditions with respect to the reference frequency of the main loop: a) it is less than the output frequency of the main oscillator; b) it is greater than 10 times the frequency spacing of the frequency channels reduced to the output frequency of the main oscillator; and c) it is removed by a whole integer multiple of the transmit or receive frequency spacing the reference frequency from the cut-off frequency of the main loop. Applicant respectfully submits that Vaucher fails to teach or suggest the features b) and c) recited above.

The Examiner has conceded that feature b) is not taught by Vaucher. It is the Examiner's position that the selection of "greater than 10 times" is simply a matter of optimal design choice. Applicant respectfully traverses and requests reconsideration. Applicant is not claiming the "greater than 10 times" limitation in a vacuum. Rather, as discussed above, it is features a), b) and c), *taken together*, which are being claimed. The Examiner has not shown the selection of "greater than 10 times" would be an optimized selection in the context of the selections for features a) and c). And in fact, such might not be an optimal value for feature b) in all situations. In the claimed invention it is the combination of "greater than 10 times" along with "less than the

frequency of the main oscillator" and "removed by a whole integer multiple" which Applicant has discovered provides an unexpected benefit in the two loop circuit to reduce an effect of voltage controlled oscillator pulling in the second loop. The Examiner's analysis does not provide any indication that Vaucher even recognizes the VCO pulling issue, much less presents a solution to such an issue. In the absence of such a teaching, it is improper for the Examiner to assert that selection of "greater than 10 times" in the context of features a) and c) would be an obvious design choice. Instead, the Examiner is well aware that the discovery by an inventor of specific values, especially in combination with each other as claimed herein, which provide an unexpected benefit or result, can properly meet the non-obviousness standard under Section 103. Reconsideration of the rejection is accordingly requested.

Notwithstanding the foregoing argument, Applicant further asserts that the Examiner's analysis of feature c) is in error. The Examiner points to the multi modulus prescaler program divider Nband in loop 1 of Vaucher as meeting the feature c) limitation. Applicant respectfully disagrees. The fact that the division ratio of the multi modulus prescaler Nband is switchable between integers means only that the input frequency band is divided into four bands corresponding respectively to the division ratios in the multi modulus prescaler. These ratios DO NOT correspond to a whole integer multiple of the transmit or receive frequency spacing as claimed. Thus, there is no anticipation or suggestion of claims 1 and 25. It is thus clear that the reference frequency for the main loop (loop 1) in Vaucher is located in a polluted zone. The Vaucher system accordingly will suffer from VCO pulling issues.

Turning next to claim 9, Applicant has amended claim 9 to include the limitations of dependent claim 13. In rejecting claim 13, the Examiner conceded that the recited limitations

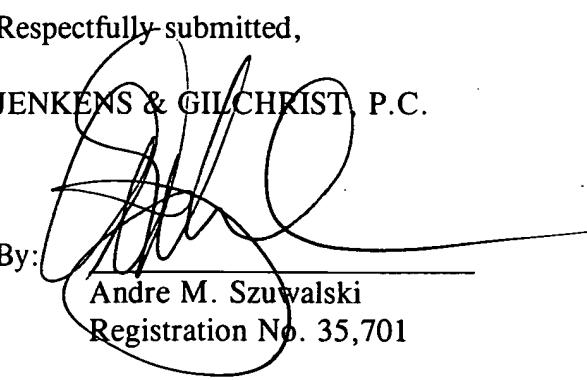
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were not met by Vaucher. It was the Examiner's position, however, that the limitation represented an obvious design choice. Applicant disagrees. The Examiner stated that Applicant had not indicated that the limitation choice solves any stated problem or is for any particular purpose. This is incorrect. Paragraphs 61-63 address this issue and show how the selection made, and recited in claim 9, results in the auxiliary loop oscillator operating at a frequency in a non-contaminated zone and is thus not subject to being perturbed. To emphasize this point, Applicant has further amended claim 9 to recite the purpose and problem solved. The Examiner further states that it appears that the invention would perform equally well without the recited limitation be applied. As clearly discussed in the specification, this is not the case since operation could move into the contaminated zone and perturbation may arise. Further, as recited in dependent claim 18, adverse VCO pulling may arise..

In view of the foregoing, Applicant submits that claim 9 is patentable over the cited prior art.

In view of the foregoing, Applicants respectfully submit that the application is in condition for favorable action and allowance.

Respectfully submitted,  
  
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